FIG.1

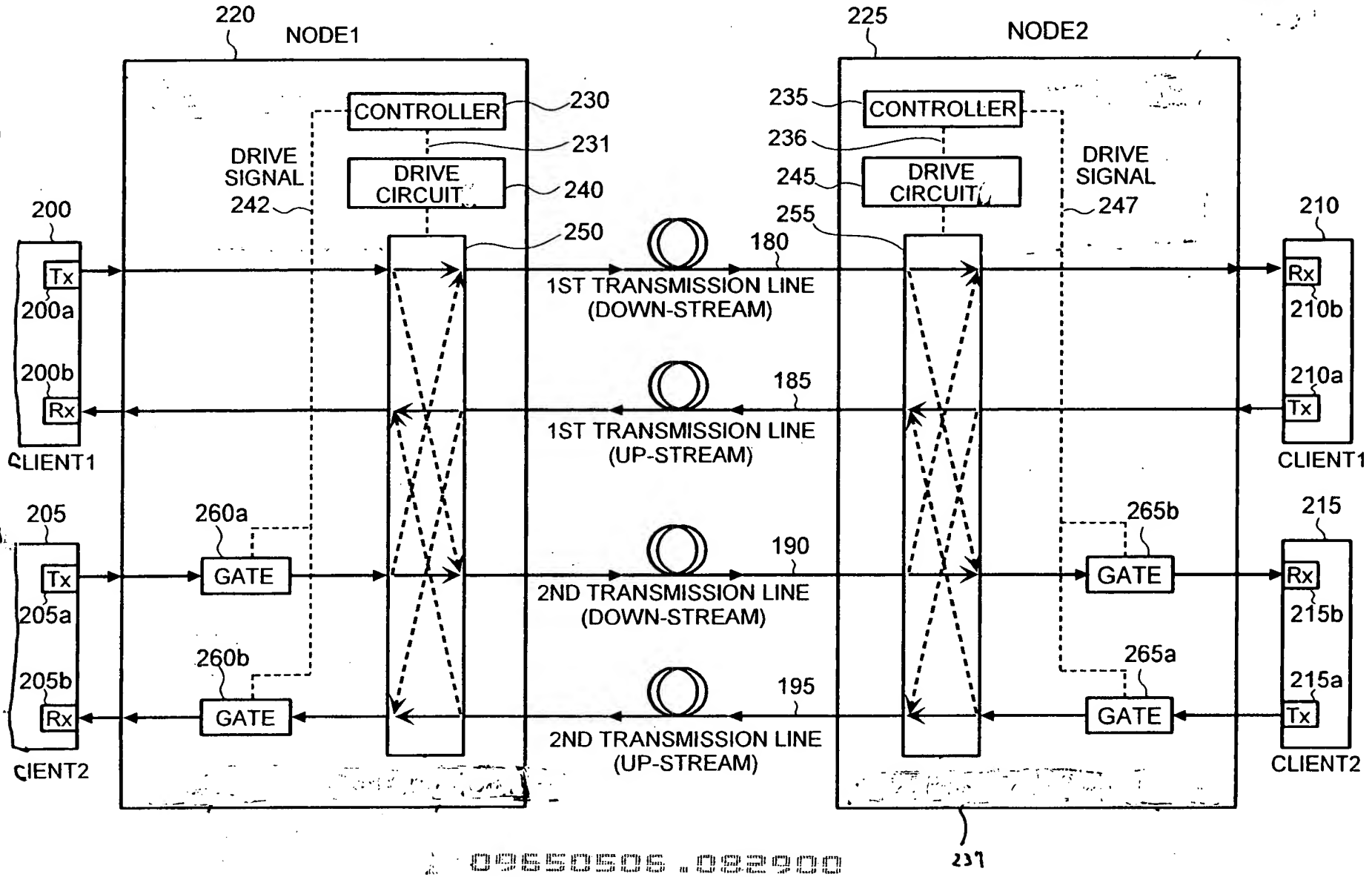

220
NODE1
225
NODE2
CONTROLLER
230
231
DRIVE SIGNAL
242
DRIVE CIRCUIT
240
250
235
CONTROLLER
236
245
DRIVE CIRCUIT
255
DRIVE SIGNAL
247
200
Tx
200a
200b
Rx
CLIENT1
180
1ST TRANSMISSION LINE
(DOWN-STREAM)
185
1ST TRANSMISSION LINE
(UP-STREAM)
210
Rx
210b
210a
Tx
CLIENT1
205
Tx
205a
205b
Rx
CLIENT2
260a
GATE
260b
GATE
190
2ND TRANSMISSION LINE
(DOWN-STREAM)
195
2ND TRANSMISSION LINE
(UP-STREAM)
265b
GATE
265a
GATE
215
Rx
215b
215a
Tx
CLIENT2
237

FIG.2

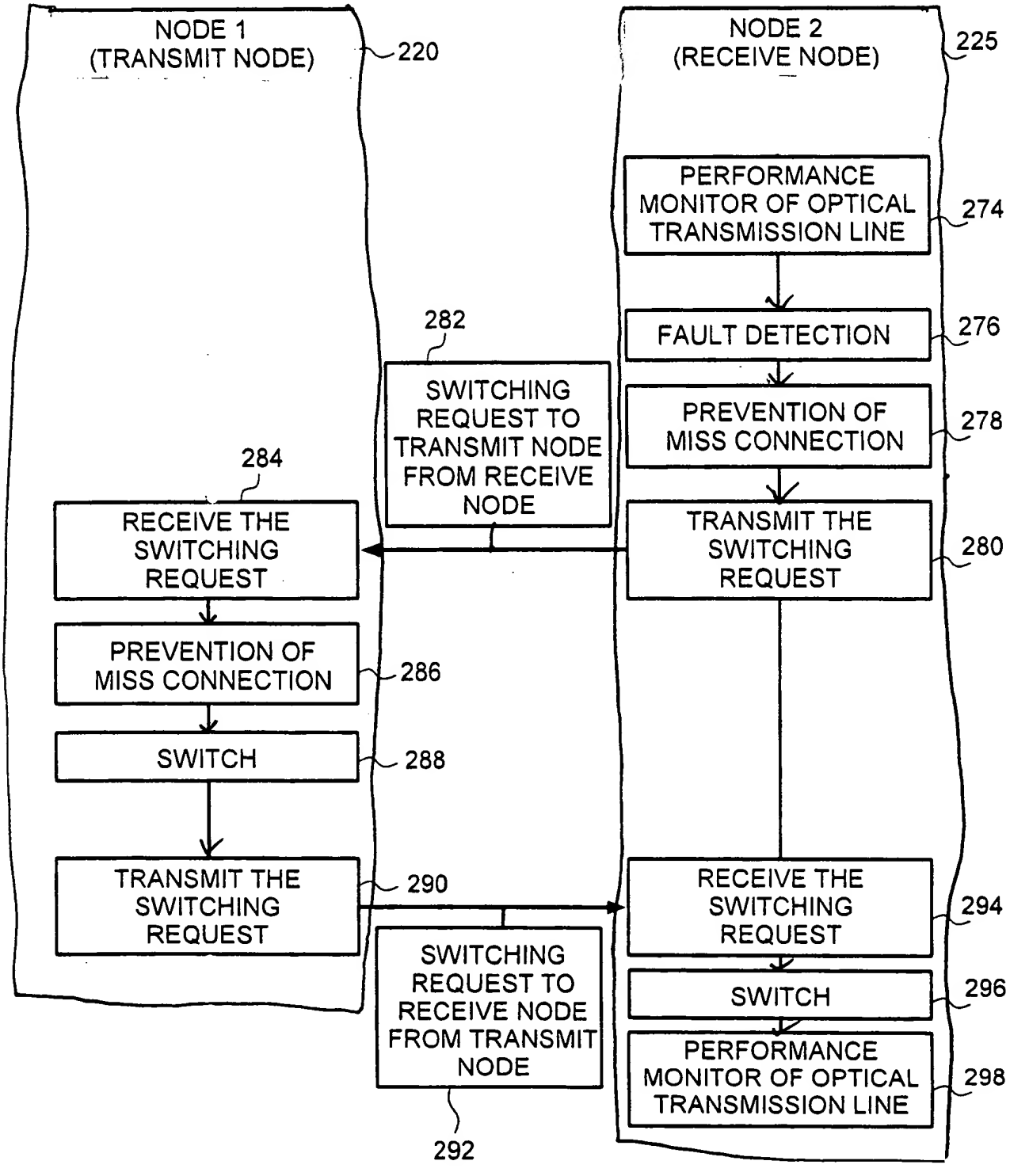
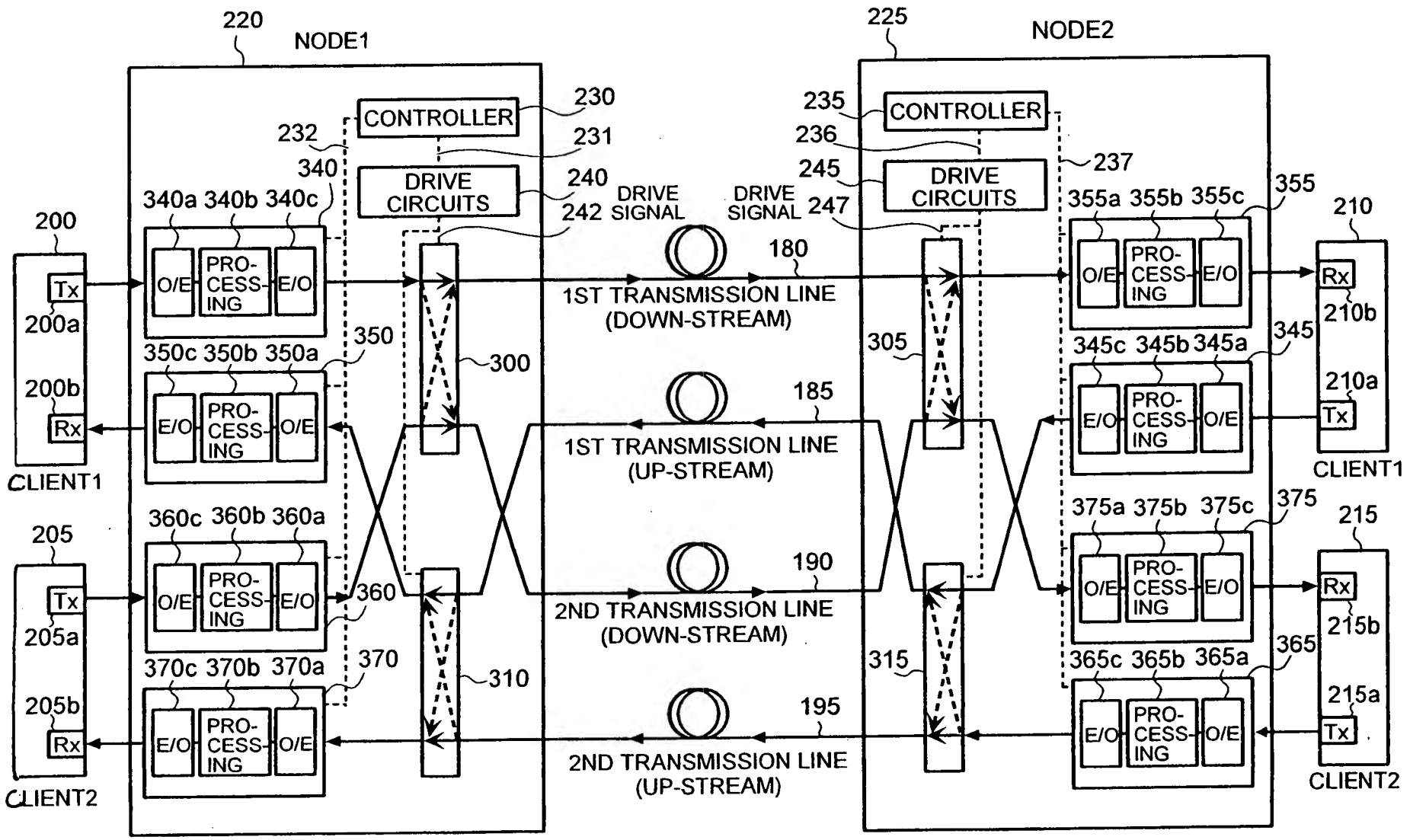

NODE 1
(TRANSMIT NODE)
220
NODE 2
(RECEIVE NODE)
225
PERFORMANCE MONITOR OF OPTICAL TRANSMISSION LINE
274
FAULT DETECTION
276
PREVENTION OF MISS CONNECTION
278
TRANSMIT THE SWITCHING REQUEST
280
282
SWITCHING REQUEST TO TRANSMIT NODE FROM RECEIVE NODE
284
RECEIVE THE SWITCHING REQUEST
PREVENTION OF MISS CONNECTION
286
SWITCH
288
TRANSMIT THE SWITCHING REQUEST
290
SWITCHING REQUEST TO RECEIVE NODE FROM TRANSMIT NODE
292
RECEIVE THE SWITCHING REQUEST
294
SWITCH
296
PERFORMANCE MONITOR OF OPTICAL TRANSMISSION LINE
298

FIG.3



0650506.082900

FIG.4

	PRIORITY	TRANSMISSION LINE	CONTROL SIGNAL COMMUNICATION EQUIPMENT	
			NODE1	NODE2
SWITCHING REQUEST TO TRANSMIT NODE (NODE1) FROM RECEIVE NODE (NODE2) (282)	FIRST	2ND TRANSMISSION LINE (UP-STREAM) 195	LINE OUTPUT DEVICE 370	LINE INPUT DEVICE 365
	SECOND	1ST TRANSMISSION LINE (UP-STREAM) 185	LINE OUTPUT DEVICE 350	LINE INPUT DEVICE 345
SWITCHING REQUEST TO RECEIVE NODE (NODE2) FROM TRANSMIT NODE (NODE1) (292)	FIRST	2ND TRANSMISSION LINE (DOWN-STREAM) 190	LINE INPUT DEVICE 340	LINE OUTPUT DEVICE 375
	SECOND	1ST TRANSMISSION LINE (DOWN-STREAM) 180	LINE INPUT DEVICE 360	LINE OUTPUT DEVICE 355

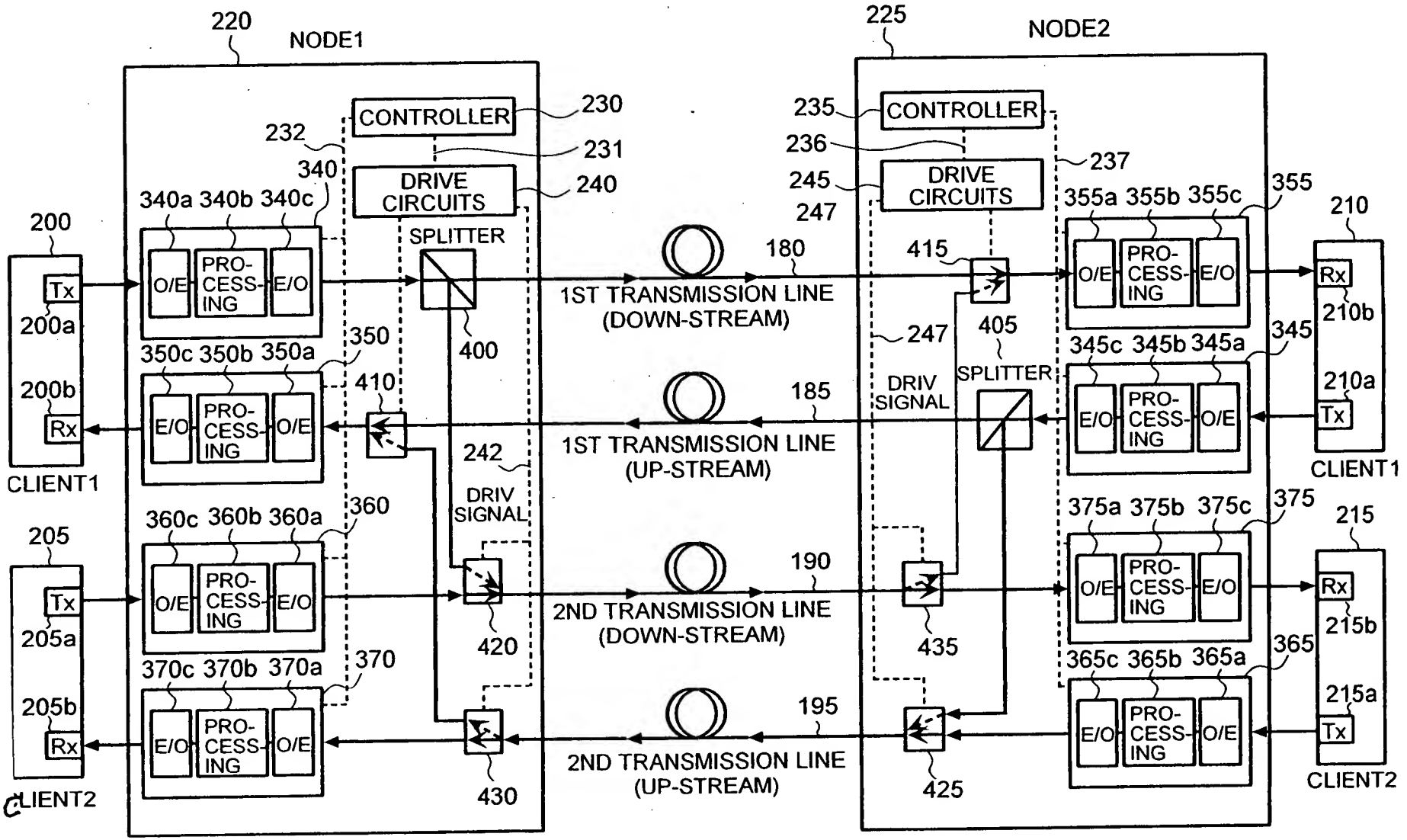
09650506 .092900

FIG.5

		1ST TRANSMISSION LINE (DOWN-STREAM) 180	1ST TRANSMISSION LINE (UP-STREAM) 185	2ND TRANSMISSION LINE (DOWN-STREAM) 190	2ND TRANSMISSION LINE (UP-STREAM) 195
NORMAL STATE	TRANSMITTER	LINE INPUT DEVICE 340	LINE INPUT DEVICE 345	LINE INPUT DEVICE 360	LINE INPUT DEVICE 365
	PERFORMANCE MONITOR	LINE OUTPUT DEVICE 355	LINE OUTPUT DEVICE 350	LINE OUTPUT DEVICE 375	LINE OUTPUT DEVICE 370
AFTER SWITCHING	TRANSMITTER	LINE INPUT DEVICE 360	LINE INPUT DEVICE 365	LINE INPUT DEVICE 340	LINE INPUT DEVICE 345
	PERFORMANCE MONITOR	LINE OUTPUT DEVICE 375	LINE OUTPUT DEVICE 370	LINE OUTPUT DEVICE 355	LINE OUTPUT DEVICE 350

09650605 .082900

FIG.6



09650506 .092900

FIG.7

	PRIORITY	TRANSMISSION LINE	CONTROL SIGNAL COMMUNICATION EQUIPMENT	
			NODE1	NODE2
SWITCHING REQUEST TO TRANSMIT NODE (NODE1) FROM RECEIVE NODE (NODE2) (282)	FIRST	2ND TRANSMISSION LINE (UP-STREAM) 195	LINE OUTPUT DEVICE 370	LINE INPUT DEVICE 365
	SECOND	1ST TRANSMISSION LINE (UP-STREAM) 185	LINE OUTPUT DEVICE 350	LINE INPUT DEVICE 345
SWITCHING REQUEST TO RECEIVE NODE (NODE2) FROM TRANSMIT NODE (NODE1) (292)	FIRST	2ND TRANSMISSION LINE (DOWN-STREAM) 190	LINE INPUT DEVICE 340	LINE OUTPUT DEVICE 375
	SECOND	1ST TRANSMISSION LINE (DOWN-STREAM) 180	LINE INPUT DEVICE 340	LINE OUTPUT DEVICE 355

0960506 .092908

FIG.8

		1ST TRANSMISSION LINE (DOWN-STREAM) 180	1ST TRANSMISSION LINE (UP-STREAM) 185	2ND TRANSMISSION LINE (DOWN-STREAM) 190	2ND TRANSMISSION LINE (UP-STREAM) 195
NORMAL STATE	TRANSMITTER	LINE INPUT DEVICE 340	LINE INPUT DEVICE 345	LINE INPUT DEVICE 360	LINE INPUT DEVICE 365
	PERFORMANCE MONITOR	LINE OUTPUT DEVICE 355	LINE OUTPUT DEVICE 350	LINE OUTPUT DEVICE 375	LINE OUTPUT DEVICE 370
AFTER SWITCHING	TRANSMITTER	LINE INPUT DEVICE 340	LINE INPUT DEVICE 345	LINE INPUT DEVICE 340	LINE INPUT DEVICE 345
	PERFORMANCE MONITOR	NONE	NONE	LINE OUTPUT DEVICE 355	LINE OUTPUT DEVICE 350

09650506.082900

FIG.9

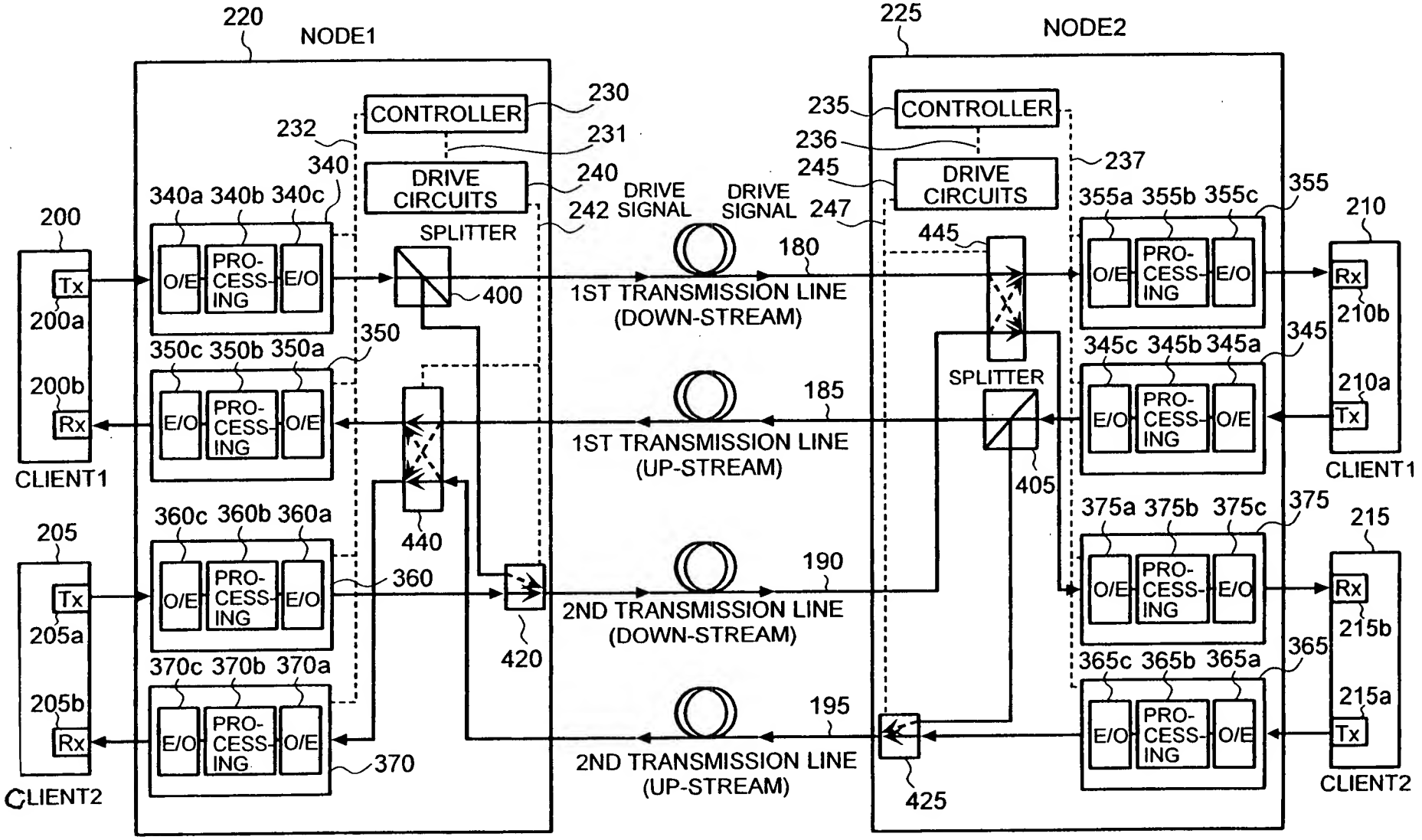
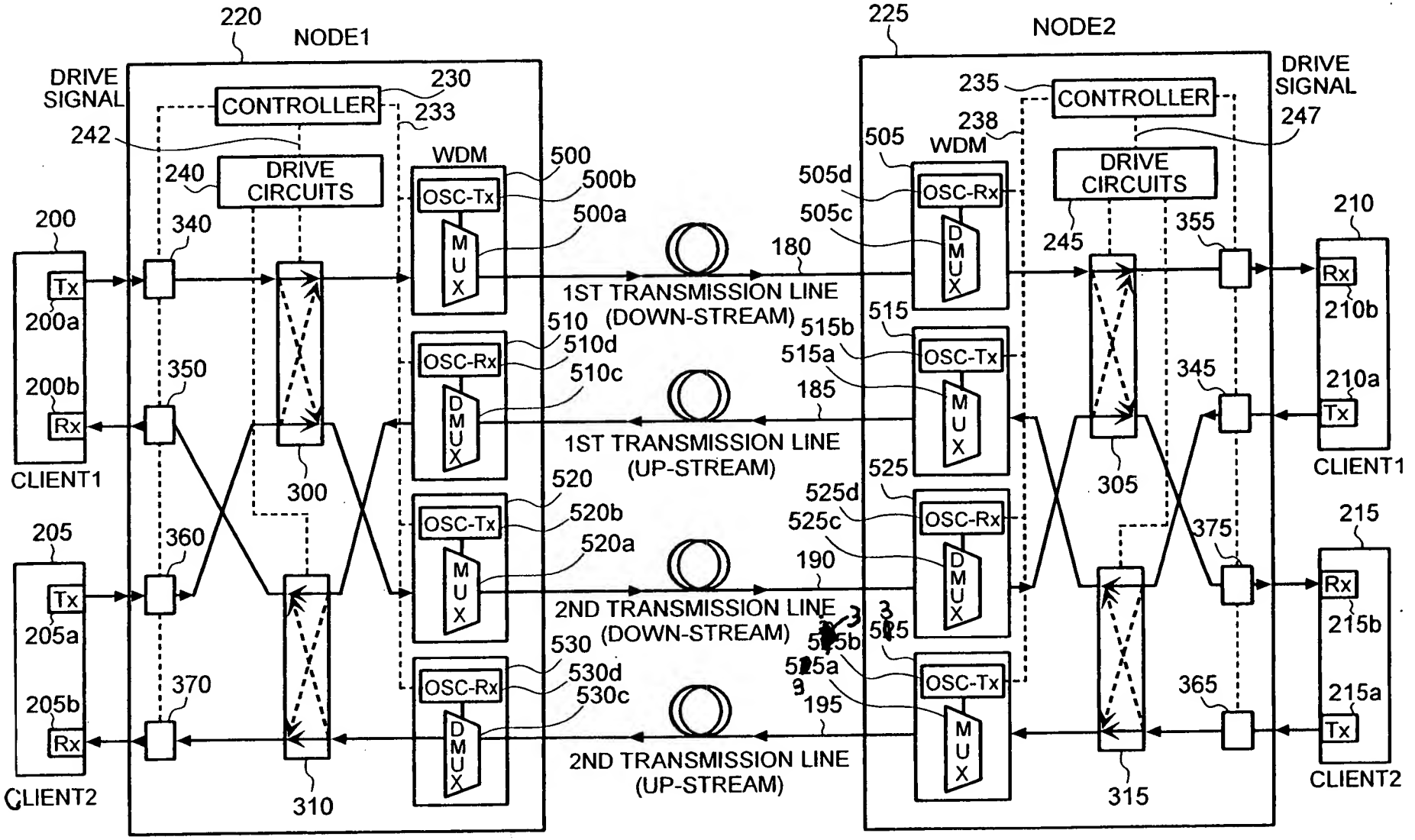

220
NODE1
225
NODE2
CONTROLLER
230
232
231
DRIVE CIRCUITS
240
340
340a 340b 340c
242
DRIVE SIGNAL
DRIVE SIGNAL
247
SPLITTER
400
180
1ST TRANSMISSION LINE (DOWN-STREAM)
200
Tx
200a
200b
Rx
CLIENT1
O/E
PRO-CESS-ING
E/O
350
350c 350b 350a
185
1ST TRANSMISSION LINE (UP-STREAM)
440
205
205a
205b
CLIENT2
360c 360b 360a
360
190
2ND TRANSMISSION LINE (DOWN-STREAM)
420
370c 370b 370a
370
195
2ND TRANSMISSION LINE (UP-STREAM)
425
235
236
245
237
445
355
355a 355b 355c
210
210b
210a
345
345c 345b 345a
405
375
375a 375b 375c
215
215b
215a
365
365c 365b 365a

FIG.10

		1ST TRANSMISSION LINE (DOWN-STREAM) 180	1ST TRANSMISSION LINE (UP-STREAM) 185	2ND TRANSMISSION LINE (DOWN-STREAM) 190	2ND TRANSMISSION LINE (UP-STREAM) 195
NORMAL STATE	TRANSMITTER	LINE INPUT DEVICE 340	LINE INPUT DEVICE 345	LINE INPUT DEVICE 360	LINE INPUT DEVICE 365
	PERFORMANCE MONITOR	LINE OUTPUT DEVICE 355	LINE OUTPUT DEVICE 350	LINE OUTPUT DEVICE 375	LINE OUTPUT DEVICE 370
AFTER SWITCHING	TRANSMITTER	LINE INPUT DEVICE 340	LINE INPUT DEVICE 345	LINE INPUT DEVICE 340	LINE INPUT DEVICE 345
	PERFORMANCE MONITOR	LINE OUTPUT DEVICE 375	LINE OUTPUT DEVICE 370	LINE OUTPUT DEVICE 355	LINE OUTPUT DEVICE 350

0960506.092900

FIG.11



09650505.082900

FIG.12 A

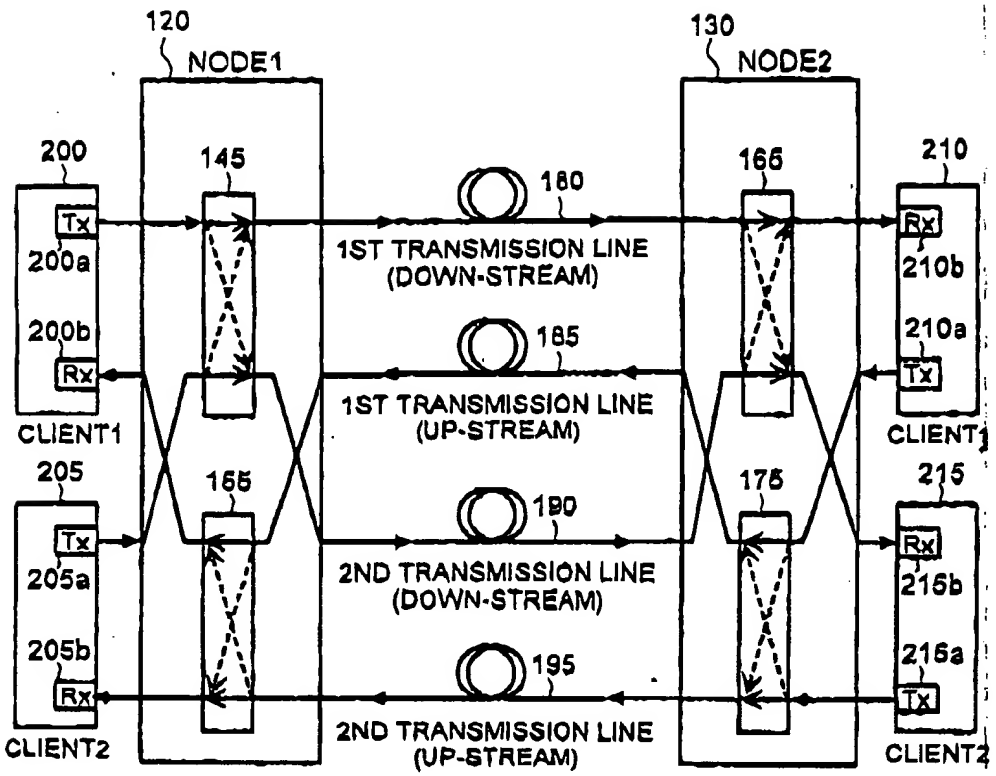


FIG.12 B

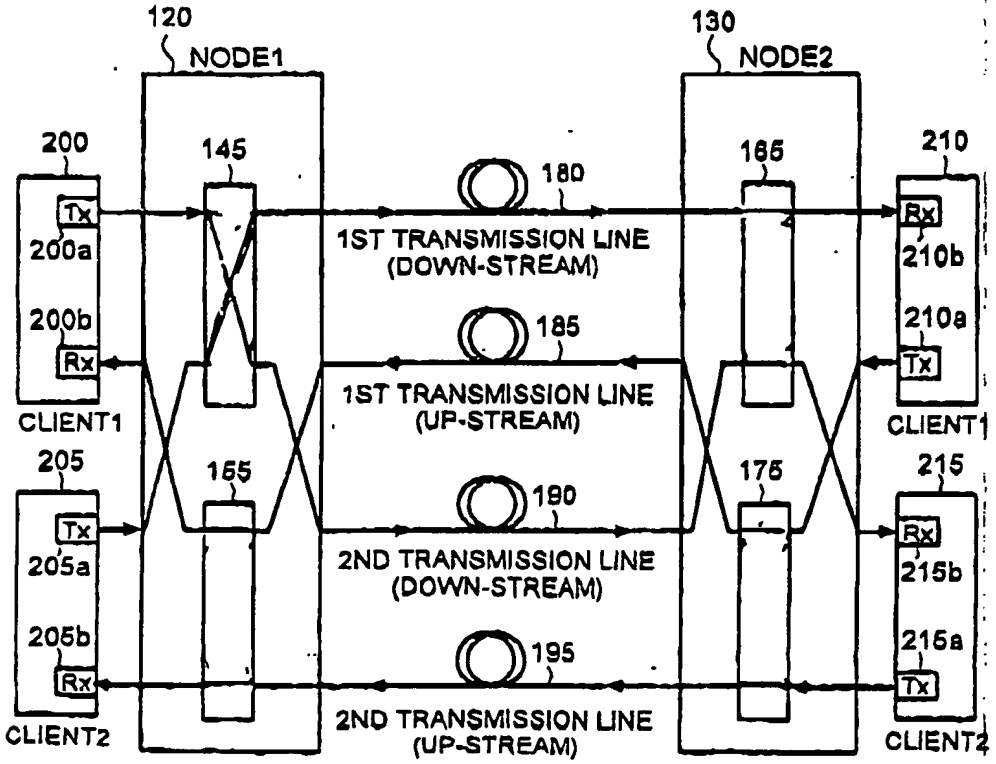


FIG.13

TRANSMITTER	RECEIVER		
	NORMAL	AFTER SWITCHING OF TRANSMITTING NODE	AFTER SWITCHING OF BOTH NODES
200a CLIENT1	210b	215b (MISS-CONNECTION)	210b
205a CLIENT2	215b	210b (MISS-CONNECTION)	215b